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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/900,188	07/09/2001	W. Benjamin Payne		5756

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Frank C. Price
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Santa And, CA 92705

EXAMINER

FRANK, RODNEY T

ART UNIT	PAPER NUMBER
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2856

DATE MAILED: 12/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/900,188

Applicant(s)

PAYNE, W. BENJAMIN

Examiner

Rodney T. Frank

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 August 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-7 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 and 4-7 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. This application has been filed with informal drawings, which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

3. Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. If the color change is due to a difference in temperature, then how can the number define a *future* ullage or an amount in a container if the color change is temperature dependent? Webster defines ullage as: "the amount that a container (as a tank or cask) lacks of being full. Clarification is needed.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1, and 4-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suzuki et al. (U.S. Patent Number 4,859,360, hereinafter referred to as Suzuki). Suzuki discloses a liquid crystal time/temperature monitoring means that uses color changing as a means indication. In

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column 23 lines 11-41, there is an example of the device disclosed where this indicator is manufactured as a polymer film for coating on a surface. The various areas of the film are sensitive to a particular color changing temperature. Figure 3 shows that the indicator device has numbers being made visible by said color changing, and this is further shown in figures 6-9. The device disclosed is capable to be adapted to indicate a number of indicating quantities depending upon application so long as the process for staying within the color-tolerance ranges of the indicator. The color tolerances determine which color is displayed and when. A good representation of the operation of the device is disclosed between column 17 line 6 and column 20 line 8.

In reference to claim 1, Suzuki discloses a cholesteric liquid crystal formulation suitable to use as an indicator of time and/or temperature. Looking at figures 1-3, a color-changing coating on a container outer wall, said coating formed in distinct areas, each area sensitive to a particular color-changing temperature, each area having a numbered section (58, 60, 62) printed on it, the number being made visible by said color change, the number indicating a condition when the contents of the container have reached a particular temperature. Since this device is utilized using color changes, both reversible and irreversible, to indicate a temperature change within predetermined temperature limits, then one of ordinary skill in the art would be able to adapt this device to be used in a manner which is described in the claims.

In reference to claims 4-6, one of ordinary skill in the art would be able to use such a device as disclosed by Suzuki et al. to indicate a variety of properties.

In reference to claim 7, though the device described in Suzuki is not disclosed to be used with compressed gas, it is an indicator that is designed to be placed on the outside of a container and measure changes in temperature to indicate different characteristics within the container. The

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device disclosed in Suzuki is configurable to meet different parameters as desired by a user as defined by the Color Play Temperature Range (see column 6 lines 48-52).

Response to Arguments

6. Applicant's arguments filed 30 August 2002 have been fully considered but they are not persuasive.

7. In reference to claim 1, the applicant adds a limitation to the preamble that is admittedly not new or novel, so the addition of the limitation "while said particular temperature prevails" would not grant patentability.

8. On page 2, line 12 of the response, the applicant states that "Our invention does not measure nor indicate temperature." The examiner agrees with this position, however, the examiner would like to point out that the device is operational only by a reaction to a change in temperature to determine ullage. The device, as stated in claim 1, has an area "sensitive to a particular color-changing temperature" and the number gives an indication of ullage "once it shall have cooled to a particular temperature." There is no operational difference between the device disclosed in Suzuki and the device in the application that would not be outside the preview of one of ordinary skill in the art. Suzuki's device uses experimentally determined limit temperatures and color retention time to indicate changes in a container (see column 13 line 26 through column 17 line 4).

9. In response to applicant's argument that "Our invention does not measure nor indicate temperature", a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use

must result in a manipulative difference as compared to the prior art. See *In re Casey*, 152 USPQ 235 (CCPA 1967) and *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

10. In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., applying Charles Law, Boyle's concept, and the common gas laws) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). For at least these reasons, the examiner feels that the rejections given, on the claims as presented, are valid.

Conclusion

11. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rodney T. Frank whose telephone number is (703) 306-5717. The examiner can normally be reached on M-F 9am -5:30p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (703) 305-4705. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703) 308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 306-3431.

RTF
November 22, 2002


DANIEL S. LARKIN
PRIMARY EXAMINER